

ABSTRACT

A thermal processing unit of the present invention includes:
a holder that holds a plurality of substrates; a reaction container
5 into which the holder is conveyed; a process-gas supplying
mechanism that supplies a process gas into the reaction container;
and a heating mechanism that heats the reaction container to
conduct a film-forming process to the substrates when the process
gas is supplied. Flow-rate-parameter table-data associating
10 number-data of the substrates to be processed by one
batch-process with target-data of flow-rate parameter of the
process gas is stored in a flow-rate-parameter table-data storing
part. A controlling unit obtains target-data of flow-rate parameter
of the process gas, depending on an actual number of the
15 substrates to be processed by one batch-process, based on the
flow-rate-parameter table-data stored in the flow-rate-parameter
table-data storing part, and controls the process-gas supplying
mechanism according to the obtained target-data. The target-data
of flow-rate parameter are determined in such a manner that a
20 speed of the film-forming process is uniform among a plurality of
batch-processes in which the numbers of substrates to be
processed are different from each other.